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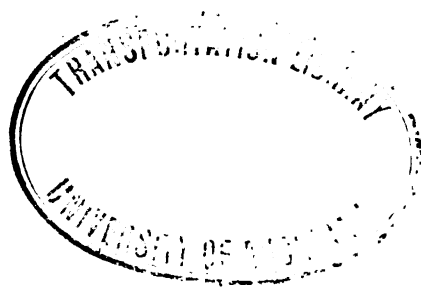


THE INDUSTRIAL ARTS INDEX

THIRD ANNUAL CUMULATION

SUBJECT INDEX TO A SELECTED LIST OF ENGINEERING
AND TRADE PERIODICALS FOR 1915

EDITED BY
MARION E. POTTER, LOUISE D. TEICH
AND HELEN M. CRAIG



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With this issue the Industrial Arts Index completes its third year. Although it is the annual volume for 1915 it indexes most of the magazines for December 1914 and only a few for December 1915. The Proceedings of the American Gas Institute, Journal of the Boston Society of Civil Engineers, Journal of the Institution of Electrical Engineers and The University of Minnesota Studies in Engineering have been added this year.

There have been many suggestions for further additions to the list of periodicals indexed. Among these are the Bulletin of the American Railway Engineering Association; Canadian Mining Institute Quarterly Bulletin; Gas Age; Gas World (London); Journal of Electricity, Power and Gas; Journal of Gas Lighting (London); London Times (Engineering Supplement); Mining and Engineering World; Mining Press; Proceedings of the Electric Light Association; Printer's Ink; Printing Art; Bulletin of the Society of Automobile Engineers; Technology Monthly and Harvard Engineering Journal; American Lumberman.

Any of our subscribers who may be interested in having one or more of these periodicals indexed are asked to send us their votes. Any suggestions as to other additions or improvements will also be carefully considered.

There are several other periodicals which would be indexed in the Industrial Arts Index if the publishers were willing to furnish us copies for the purpose. It is for this reason that Ice and Refrigeration, Electric Journal, American Machinist, and Proceedings of the American Society of Civil Engineers are not included.

National Preparedness and Military Training

A new aid to the many who are discussing "preparedness" is the Abridged Debaters' Handbook on military training, just published by The H. W. Wilson Company (25c.). This covers the question of military training in schools and colleges, gives a list of organizations working for or against national defense, a brief, six pages of bibliography, and fifty-five pages of excerpts on both sides of the question. National Defense, one of the titles in the Debaters' Handbook series, price \$1.00, should be used to supplement the one on military training, if fuller information as to the present strength of our national defenses is desired.

A larger handbook on military training, in the regular series, will be issued as soon as the amount of valuable new material seems to warrant it. This handbook will include the question of compulsory military service.

Notes and Announcements

The Civil Engineers' Society of St. Paul began in November the publication of a monthly bulletin. This publication "is for the purpose of giving to the society an organ through which it may advocate a better understanding of the engineering profession in relation to the public welfare."

The Journal of the Association of Engineering Societies will be discontinued with the December, 1915, issue, owing to the disbanding of the Association on December 31, 1915. The Engineers' Club of St. Louis, the largest society in the Association and its active head for the past two years, will begin the publication of a bi-monthly journal to be known as the Journal of the Engineers' Club of St. Louis.

The Associated Technical Men, an association formed in 1914 for the purpose of furthering the interests of technical men, has commenced the publication of a monthly bul-

NOTES AND ANNOUNCEMENTS

letin to keep all members of the society informed as to its progress and to acquaint non-members with the work it is doing. A. M. Wolf, 180 North Dearborn Street, Chicago, is editor of the publication.

The first number of the *Utilities Magazine* was published in July, 1915. This is the official organ of the Utilities Bureau, which grew out of the conference of American mayors on public policies as to municipal utilities, held in Philadelphia, in November, 1914. In November, 1915, a Valuation Conference under the auspices of this bureau was held in Philadelphia, seven sessions being held. The proceedings of the conference will be made available in the January issue of the *Utilities Magazine*.

The *Rhode Island Highway News*, the first number of which was issued in September, 1915, is a publication of the State Board of Public Roads, and is similar to those which are issued by the highway authorities of several other states. It contains short articles on the maintenance of bituminous macadam and water bound macadam roads, a description of the business methods in the office of the board and discussions of various phases of construction and maintenance work.

There were no numbers of the *Journal of the Institution of Electrical Engineers* published between the issues of June 15 and Dec. 1.

The first issue of the new quarterly *Bulletin of the National District Heating Association* has made its appearance, being dated October, 1915. The bulletin is of standard magazine size. Under the committee heading, it is stated that the station operating committee will take up, among other things, the subjects of (1) oil as a fuel; (2) bleeder type of turbo-generator, and (3) operating data relative to a certain heating plant on which accurate information will be obtained by the committee through tests made by one of the member companies.

The *Textile World Record*, published by the Lord & Nagle Company, and the *Textile Man-*

ufacturers Journal, published by J. H. Bragdon & Company, have been consolidated to form a new publication known as the *Textile World Journal*. This is issued weekly, combining the news and market report features, which have been a specialty of the *Textile Manufacturers Journal*, and the technical machinery and special features of the *Textile World Record*. The Bragdon, Lord & Nagle Company, Incorporated, publish the *Textile World Journal* at their publication office, 377 Broadway, New York.

The *Railway Electrical Engineer*, which has been published by the Wray Publishing Company, at Chicago, has been bought by the Simmons-Boardman Publishing Company, the publisher of the *Railway Age Gazette*, and the *Signal Engineer*. Beginning with November it will be published by the Simmons-Boardman Publishing Company from its New York office. It will not be consolidated with any of the other periodicals of this company, but will be continued as a separate monthly publication.

The *Colliery Engineer*, formerly published by the International Textbook Company, at Scranton, Pennsylvania, has been purchased by the Hill Publishing Company, and was consolidated with the *Coal Age* in November. The latter periodical will be added to the list of those indexed in the *Industrial Arts Index*.

Among the magazines suggested for indexing in the *Industrial Arts Index* is the *Mining and Engineering World*, published in Chicago. The weekly issues of this magazine contain the titles of articles on mining, metallurgy and geology appearing in American and foreign periodicals. These are cumulated in semi-annual volumes, and published as the *Mining World Index of Current Literature*. Some four hundred periodicals are indexed, also publications of schools, societies, and government bureaus, and new books. The index has a classified arrangement, and, in many cases, a brief annotation follows the title. The seventh volume, covering January to June, 1915, has recently been published.

List of Periodicals Indexed

Am Chem Soc J—Journal of the American Chemical Society. \$6. Charles L. Parsons, sec., Box 505, Washington, D. C.

Am Eng—American Engineer. See Ry Age (Mech ed).

Am For—American Forestry. \$3; single numbers 25c. American Forestry Assn., 1410 H St, N. W., Washington, D. C.

Am Gas Inst Pro—Proceedings of the American Gas Institute, ninth annual meeting, 1914. \$7.50 to libraries. American Gas Institute, 29 W 39th St, New York.

Am Gas Light J—American Gas Light Journal. \$3; single numbers 10c. American Gas Light Journal, 42 Pine St, New York.

Am Ind—American Industries. \$1; single numbers 10c. National Manufacturers Co., 30 Church St, New York.

Am Inst Arch J—Journal of the American Institute of Architects. \$5; single numbers 50c. American Institute of Architects, The Octagon, Washington, D. C.

Am Inst E E Pro—American Institute of Electrical Engineers. Proceedings. \$10; single numbers \$1. F. L. Hutchinson, sec., 33 W 39th St, New York.

Am Inst Min E Bul—Bulletin of the American Institute of Mining Engineers. subs. \$10; single numbers \$1; to members, public libraries, and educational institutions, \$5; single numbers 50c. B. Stoughton, sec., 29 W 39th St, New York.

Am Soc Heat & V E—Transactions of the American Society of Heating and Ventilating Engineers. American Society of Heating and Ventilating Engineers, 29 W 39th St, New York.

Am Soc M E J—Journal of the American Society of Mechanical Engineers. \$3; single numbers 35c. American Society of Mechanical Engineers, 29 W 39th St, New York.

Am Water Works Assn J—Journal of the American Water Works Association. American Water Works Assn., 2419 Greenmount Av, Baltimore, Md.

Arch & Bldg—Architecture and Building. \$2; single numbers 20c. William T. Comstock Co., 23 Warren St, New York.

Arch Rec—Architectural Record. \$3; single numbers 35c. Architectural Record Co., 115 W 40th St, New York.

Assn Eng Soc J—Journal of the Association of Engineering Societies. \$3; single numbers 20c. Association of Engineering Societies, J. W. Peters, sec., 3817 Olive St, St. Louis, Mo.

Automobile—Automobile. \$3; single numbers 10c. Class Journal Co., 231 W 39th St, New York.

Bldg Age—Building Age. \$2; single numbers 20c. David Williams Co., 239 W 39th St, New York.

Boston Soc C E J—Journal of the Boston Society of Civil Engineers. \$4 (ten numbers); single numbers 50c. Boston Society of Civil Engineers, 715 Tremont Temple, Boston.

Brickb—Brickbuilder. \$5; single numbers 50c. Rogers & Manson Co., 85 Water St, Boston.

Colliery—Colliery Engineer. \$2; single numbers 25c. Hill Pub Co., 10th Av at 36th St, New York.

Consolidated with Coal Age on Nov. 6.

Concrete Cem—Concrete-Cement Age. \$1.50; single numbers 15c. Concrete-Cement Age Pub. Co., 97 West Fort St, Detroit, Mich.

Dom Eng—Domestic Engineering. \$2; single numbers 10c. Domestic Engineering Co., 445-447 Plymouth Court, Chicago.

Econ Geol—Economic Geology. \$3; single numbers 50c. Economic Geology Pub. Co., 41 North Queen St, Lancaster, Pa.

Elec Ry J—Electric Railway Journal. \$3; single numbers 10c. McGraw Pub. Co., 239 W 39th St, New York.

Elec R & W Elec'n—Electrical Review and Western Electrician. \$3; single numbers 10c. Electrical Review Pub. Co., 608 S Dearborn St, Chicago.

Elec W—Electrical World. \$3 single numbers 10c. McGraw Pub Co., 239 W. 39th St, New York.

Engineer—Engineer. Thick paper ed £2 6d; Canadian subs £1 16s; thin paper ed £1 16s; Canadian subs £1 11s 6d. Engineer, 33 Norfolk St, Strand, London, W. C.

Eng & Contr—Engineering and Contracting. \$2. Myron C. Clark Pub. Co., 608 S Dearborn St, Chicago.

Eng & Min J—Engineering and Mining Journal. \$5; single numbers 15c. Hill Pub. Co., 10th Av at 36th St, New York.

Eng M—Engineering Magazine. \$3; single numbers 25c. Engineering Magazine Co., 140 Nassau St, New York.

Eng N—Engineering News. \$5; single numbers 15c. Hill Pub. Co., 10th Av at 36th St, New York.

Eng Rec—Engineering Record. \$3; single numbers 10c. McGraw Pub. Co., 239 W 39th St, New York.

Eng Soc W Pa—Proceedings of the Engineers' Society of Western Pennsylvania. \$5; single numbers 50c. Engineers' Society of Western Pennsylvania, 2511 Oliver Bldg, Pittsburgh, Pa.

Foundry—Foundry. \$1; single numbers 15c. Penton Pub. Co., Penton Bldg, Cleveland, O.

Gen Elec R—General Electric Review. \$2; single numbers 20c. General Electric Co., Schenectady, N. Y.

Good Roads n s—Good Roads new series. \$2; single numbers 5c except first numbers of each month 10c. E. L. Powers Co., 150 Nassau St, New York.

Heat & Ven—Heating and Ventilating Magazine. \$1; single numbers 10c. Heating & Ventilating Magazine Co., 1123 Broadway, New York.

Horseless Age—Horseless Age. \$2; single numbers 10c. Horseless Age Co., 440 4th Av, New York.

Ill U Eng Exp Sta Bul—Illinois University Engineering Experiment Station. Bulletin. Univ. of Ill., Urbana.

Illum Engr—Illuminating Engineer. 10s 6d; single numbers 1s. Illuminating Engineering Pub. Co., 32 Victoria St, London, S. W.

Illum Eng Soc—Transactions of the Illuminating Engineering Society. \$5; single numbers 75c. Illuminating Engineering Soc., 29 W 39th St, New York.

Ind Eng—Industrial Engineering and Engineering Digest. \$2; single numbers 20c. Technical Literature Co., 120 W 32d St, New York.

Inland Ptr—Inland Printer. \$3; single numbers 30c. Inland Printer Co., 632 Sherman St, Chicago.

Inst E E J—Journal of the Institution of Electrical Engineers. single numbers 3s 6d. E. & F. N. Spon, Ltd., 57 Haymarket, London, S. W.; Spon & Chamberlain, 123 Liberty St, New York.

Int Marine Eng—International Marine Engineering. \$2. Aldrich Pub. Co., 17 Battery Place, New York.

Iron Age—Iron Age. \$5; single numbers 20c. David Williams Co., 239 W 39th St, New York.

Iron Tr R—Iron Trade Review. \$4; single numbers 15c. Penton Pub. Co., Penton Bldg., Cleveland, O.

LIST OF PERIODICALS INDEXED

- J Account**—Journal of Accountancy. \$3; single numbers 30c. Ronald Press Co., 20 Vesey St, New York.
- J Fr Inst**—Journal of the Franklin Institute. \$5; single numbers 50c. Franklin Institute, Philadelphia.
- J Ind & Eng Chem**—Journal of Industrial and Engineering Chemistry. \$6. American Chemical Society, Easton, Pa.
- Locomotive**—Locomotive. 50c; single numbers gratis; recent bound volumes \$1. Hartford Steam Boiler Inspection & Insurance Co., Hartford, Conn.
- Mach**—Machinery. Engineering edition \$2; coated pa. \$2.50; single numbers 20c. Industrial Press, 140 Lafayette St, New York.
- Met & Chem Eng**—Metallurgical and Chemical Engineering. \$3; single numbers 25c. McGraw Pub. Co., 239 W 39th St, New York.
- Metal Ind n s**—Metal Industry new series. \$1; single numbers 10c. Metal Industry, 99 John St, New York.
- Metal Work**—Metal Worker, Plumber & Steam Fitter. \$2; single numbers 10c. David Williams Co., 239 W 39th St, New York.
- Minn U Bul**—University of Minnesota. Studies in engineering. Univ. of Minn., Minneapolis.
- Munic Eng**—Municipal Engineering. \$2; single numbers 25c. Engineering Pub. Co., 702 Wulsin Bldg, Indianapolis, Ind.
- Munic J**—Municipal Journal. \$3; single numbers 10c; special numbers 25c. Municipal Journal and Engineer, Inc., 50 Union Square, New York.
- Power**—Power. \$2; single numbers 5c. Hill Pub. Co., 10th Av at 36th St, New York.
- Ry Age**—Railway Age Gazette. \$5; single numbers 15c. Simmons-Boardman Pub. Co., Woolworth Bldg, New York.
- Ry Age (Mech ed)**—Railway Age Gazette, mechanical edition including the American Engineer. \$2; single numbers 20c. Simmons-Boardman Pub. Co., Woolworth Bldg, New York.
- Ry R**—Railway Review. \$4; single numbers 15c. Railway Review, 1407 Ellsworth Bldg, Chicago; 30 Church St, New York.
Formerly Railway and Engineering Review.
- Sch Mines Q**—School of Mines Quarterly. \$1.50; single numbers 50c. School of Mines Quarterly, Columbia University, New York.
- Sci Am**—Scientific American. \$3; single numbers 10c. Munn & Co., 361 Broadway, New York.
- Sci Am S**—Scientific American Supplement. \$5; single numbers 10c. Munn & Co., 361 Broadway, New York.
- Sibley J**—Sibley Journal of Engineering. \$2; single numbers 25c. Sibley College, Cornell Univ., Ithaca, N. Y.
- Stevens Ind**—Stevens Indicator. \$1.50; single numbers 50c. Stevens Institute of Technology, Hoboken, N. J.
- Textile World**—Textile World Journal. \$3 Bragdon, Lord & Nagle Co., 377 Broadway, New York.
Formerly published as Textile World Record, monthly at \$2
- U S Agric Bul**—United States. Dept. of Agriculture. Bulletin. Distributed free of charge. U. S. Dept. of Agriculture, Division of Publications, Washington, D. C.
Contributions from the Bureau of Chemistry, Forest Service and Office of Public Roads are indexed.
- U S Bur For & Dom Com**—United States. Bureau of Foreign and Domestic Commerce. Special agents series. U. S. Bureau of Foreign and Domestic Commerce, Washington, D. C.
- U S Bur Mines Bul**—United States. Bureau of Mines. Bulletin. Distributed free of charge. U. S. Bureau of Mines, Washington, D. C.
- U S Bur Mines Circ**—United States. Bureau of Mines. Miners' circular. U. S. Bureau of Mines, Washington, D. C.
- U S Bur Mines Tech Pa**—United States. Bureau of Mines. Technical paper. U. S. Bureau of Mines, Washington, D. C.
- U S Bur Stand Bul**—United States. Bureau of Standards. Bulletin. Gratis to educational and scientific institutions and to government depositories. U. S. Bureau of Standards, Washington, D. C.
Sold to individuals by the Superintendent of Documents. \$1; single numbers 25c.
- U S Bur Stand Circ**—United States. Bureau of Standards. Circular. U. S. Bureau of Standards, Washington, D. C.
- U S Bur Stand Tech Pa**—United States. Bureau of Standards. Technologic papers. U. S. Bureau of Standards, Washington, D. C.
- U S Sp Cons Rep**—United States. Special consular reports. U. S. Bureau of Foreign and Domestic Commerce, Washington, D. C.
- W Soc E J**—Journal of the Western Society of Engineers. \$3; single numbers 50c. Western Society of Engineers, 1735 Monadnock Blk, Chicago.
- Wis U Bul Eng S**—Bulletin of the University of Wisconsin, Engineering Series. Univ. of Wis., Madison.

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- Aberdeen, South Dakota**
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Sewage disposal plant at Aberdeen, South Dakota; with discussion. W. G. Potter. II plans W Soc E J 19:788-805, pl 1-8 O '14; Same. Eng & Contr 43:37-8 Ja 13 '15; Same cond. Metal Work 84:214-17 Ag 13 '15
Water supply
Rectangular fire-service reservoir. W. G. Potter. II Eng Rec 71:260-1 F 27 '15
- Abilene, Kansas**
Politics and government
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- Ability**
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Measuring human intelligence; standardized tests used by the Public health service. H. A. Knox. II Sci Am 112:52-3+ Ja 9 '15
Mental tests of dementia. B. Hart and C. Spearman. Sci Am S 80:206-8 S 25 '15
New way of measuring mental ability. A. M. Jungmann. II diags Sci Am S 80:140-1 Ag 28 '15
Selecting the right occupation. Eng N 74:321-2 Ag 12 '15
Teaching defective children. A. M. Jungmann. Sci Am 112:361 Ap 17 '15
- Abblain St. Nazaire, France**
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- Abrasive wheels.** See Grinding machines; Grinding wheels
- Abrasives**
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Abrasive products at San Francisco fair. II Iron Tr R 57:487 S 9 '15
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Grinding wheels for foundry use. C. F. Dietz. Iron Tr R 57:314-18+ Ag 12 '15
Grinding wheels; history and description of various abrasive compounds. W. C. Gold. Metal Ind n s 13:450-2 N '15
Laps and lapping; abstracts. W. A. Knight and A. A. Case. diags Am Soc M E J 37: 451-6 Ag '15; Iron Tr R 57:24-6 Jl 1 '15; Mach 21:976-8 Ag '15; Discussion. Am Soc M E J 37:456-8 Ag '15
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- Absolute zero.** See Temperature, Low
- Absorbent cotton.** See Cotton, Absorbent
- Absorption**
Absorption of glucose by bone-black. H. A. Morton. Am Chem Soc J 36:1832-8 S '14
Reagents for use in gas analysis; alkaline pyrogallol. R. P. Anderson. diags J Ind & Eng Chem 7:587-96 Jl '15
Specific absorption of reagents for gas analysis. R. P. Anderson. J Ind & Eng Chem 7: 587 Jl '15
- Academic freedom**
Common sense regarding academic freedom. Eng Rec 72:35 Jl 10 '15
Common sense regarding academic freedom. J. W. Alvord. Eng Rec 72:176 Ag 7 '15
- Accelerometer**
Measuring shocks of vehicles and vibrations of buildings; a means for investigating important traffic problems. A. Boyer-Guillon. II diags Sci Am S 78:364-5 D 5 '14
- Accidents**
See also Aeronautics—Accidents; Automobile accidents; Collisions at sea; Railroads—Accidents; Shipwrecks; Street accidents; Subways—Accidents
- Accidents, Industrial**
Conditions of industrial accidents. Sci Am S 79:179 Mr 20 '15
Crane and chain accidents; abstract. Ind Eng 14:411-12 O '14
Explosives and accidents. Engineer 118:531-2 D 4 '14
Industrial accidents in Massachusetts. Sci Am 112:433 My 8 '15
Intoxication, a cause of accidents. T. D. West. II Iron Tr R 56:713-16 Ap 8 '15; Same. Foundry 43:267-70 Jl '15
Prevention of accidents in cotton mills. J. Calder. Textile World 49:622-4 S '15
Prevention of infection. T. Darlington. Iron Tr R 56:770 Ap 15 '15
Relation between accidents and inadequate lighting. Illum Engr 8:383-5 S '15
Safety in stone quarrying; typical accidents in quarries. O. Bowles. U S Bur Mines Tech Pa 111:43-6 '15
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- Accountants**
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- Accountants, Public**
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- Accountant's report from the standpoint of the several parties at interest. J. S. M. Goodloe. J Account 20:91-103 Ag '15
 Accounting for cement packages. G. Wilson. J Account 19:198-205 Mr '15
 Accounting for depreciation. R. Sealy. Elec W 65:460-1 F 20 '15
 Accounting system for contractors. Elec R & W Elec'n 66:152 Ja 23 '15
 Consolidation of balance sheets in holding company accounting. A. W. Wright. J Account 19:21-33 Ja '15
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 Credits from the viewpoint of a certified public accountant. F. H. Hurdman. J Account 18:485-54 D '14
 Department store accounts. H: C. Magee. J Account 19:268-91 Ap '15
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 Importance of accrued accounts. J: F. Forbes. Elec Ry J 46:809-10 O 16 '15
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- Accountancy in Canada. G: Edwards. J Account 20:334-48 N '15
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- Words often used incorrectly. S. Walton. J Account 20:385-6 N '15

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- Accountancy in Canada. G: Edwards. J Account 20:334-48 N '15

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- Accountant in the Orient. E. S. Fischer. J Account 20:356-60 N '15

Accumulators. *See* Storage batteries

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Acetic acid

- Indicator in pyroligneous acid. J. M. Johlin. J Ind & Eng Chem 7:596 Jl '15
 Production of acetone from pyroligneous acid. M. Darrin. Il J Ind & Eng Chem 7:927-9 N '15

Acetic anhydride

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- Car, truck and accessory plants expand. *il* *Automobile* 31:1151-3+ D 24 '14
- Detroit plants make \$5,000,000 additions. *il* *Automobile* 33:324-5 Ag 19 '15
- Directory of automobile makers. *Automobile* 31:1262-3 D 31 '14
- Flint—second city of automobile industry. L. V. Spencer. *il* *Automobile* 32:569-75 Ap 1 '15
- How Dodge brothers plant was reorganized. H. C. Estep. *il* plan *Iron Tr R* 56:909-16 My 6 '15
- Rehabilitation of existing plants as a factor in production costs. H. V. Coes. plans *Eng M* 49:363-8 Je '15
- Solving the spares problem: the Maxwell company's Newcastle plant. *il* *Automobile* 32:316-20 F 18 '15
- Stamping plant for quantity production. F. L. Prentiss. *il* *Iron Age* 95:489-94 Mr 4 '15
- \$25,000,000 for new buildings and equipment. *il* Horseless Age 36:258-9 S 15 '15
- Unique conveyor in automobile plant. *il* plan *Iron Age* 96:565-8 S 9 '15

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War rushes French plants; automobile factories working 24 hours; a day on ammunition, aeroplane and military supplies. W. F. Bradley. *Il Automobile* 32:1013-15+ *Je* 10 '15

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Automobile fans. See Automobiles—Fans**Automobile headlights. See Automobiles—Lighting****Automobile horns**

Automobile warning signals. A. L. McMurtry. *diags Eng M* 49:602-6 *Jl* '15

Dies for drawing flanged shells. E. P. Davis. *diags Mach* 21:532-4 *Mr* '15

Johns-Manville co. announce new motor, hand and vibrator horns. *Il Horseless Age* 34:973 *D* 30 '14

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Are you selling cars or buying them? *Horseless Age* 34:901-2 *D* 23 '14

Automobile chronology for 1914. *Automobile* 31:1154-5 *D* 24 '14

Certified tests by dealers as sales helps. *Horseless Age* 35:597-8 *My* 5 '15

Educating the dealer's mechanic. A. L. Horn. *Horseless Age* 35:641 *My* 12 '15

Forces at work during 1914—the year review. *Automobile* 31:1143-6 *D* 24 '14

Influence of the war on the automobile industry. H. W. Perry. *Il Sci Am* 113:206-8 *S* 4 '15

Interesting facts about the automobile business. G. B. Griffin. *Elec R & W Elec'n* 67:338 *Ag* 21 '15

Makers cannot maintain prices through contracts with dealers. *Automobile* 31:1085 *D* 10 '14

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What the motor car does for other industries. G. B. Griffin. *Horseless Age* 36:187 *Ag* 15 '15

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Accounting

Should dealers' parts accounts be standardized? A. H. Remsen. *Il Horseless Age* 36:69 *Jl* 21 '15

Service

What constitutes service to the owner? C. Gould. *Horseless Age* 36:90-1 *Jl* 21 '15

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Australia

American-made chassis lead in Australian trade. *Automobile* 32:816 *My* 6 '15

New South Wales' 1914 imports \$2,893,830. *Automobile* 32:531 *Mr* 25 '15

Belgium

Belgian car factories intact. W. F. Bradley. *Il map Automobile* 32:99-101 *Ja* 21 '15

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Business gain in western Canada. A. C. Emmett. *Automobile* 31:1112-13 *D* 17 '14

Ceylon

British India. U S Sp Cons Rep 72:574-88 '15

France

Americans speed up French factories. W. F. Bradley. *Il Automobile* 32:450-1 *Mr* 11 '15

British duty threatens French exports. *Il Automobile* 33:734-5 *O* 21 '15

French automobile industry in good condition. *Il Automobile* 32:101-2 *Ja* 21 '15

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Germany's export trade; how the 1912 foreign business of \$30,000,000 was distributed. M. Braun. *Automobile* 31:1009-13+ *D* 3 '14

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Analysis of automobile industry in Great Britain during war. *Automobile* 33:38-9 *Jl* 1 '15

Great Britain again our largest buyer. *Automobile* 32:736-7 *Ap* 22 '15

War stops Olympia, but not car development. J. E. Schipper. *diags Automobile* 31:1055-7 *D* 10 '14

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British India. U S Sp Cons Rep 72:191-204 '15

U. S. motor cars gain prestige in India.

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Automobile trade in Tasmania. *Horseless Age* 35:184 *F* 3 '15

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Car and truck sales in Southwest gain 64.2% in 3 months. *Automobile* 32:576-8 *Ap* 1 '15

Colorado 1915 motor car registration by make. H. G. Hedden. *Automobile* 33:172-3 *Jl* 22 '15

Detailed export statistics show that U. S. dominates automobile world. *Automobile* 33:624-5 *S* 30 '15

Directory of automobile makers. *Automobile* 31:1262-3 *D* 31 '14

Distribution of motor car exports for the past fiscal year. *Horseless Age* 36:244 *S* 1 '15

Exports for 10 months ending October total \$21,241,860. *Automobile* 31:1129 *D* 17 '14

Exports of 1913-14 exceeded forty millions; tabulation. *Horseless Age* 34:301-3 *Ag* 26 '14

Exports take another jump. *Horseless Age* 36:170 *Ag* 15 '15

Farmers of Southwest could buy 94,000 cars at \$1,000 each. *map Automobile* 32:406-7 *Mr* 4 '15

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Gaining the summit of American industries. *Horseless Age* 36:264 *S* 15 '15

History of the American automobile industry. D. Beecroft. *Automobile* 33:775-9, 836-7, 880-1, 932-3 *O* 28-N 18 '15

Kansas City—a great distributing center. D. Beecroft. *Automobile* 32:336-7 *F* 18 '15

Michigan's six months' registrations. M. Braun. *Automobile* 33:504-5 *S* 16 '15

Middle west crops presage increased car sales. *map Automobile* 33:497-9+ *S* 16 '15

More than 1,800,000 cars registered in U. S. *Horseless Age* 35:4 *Ja* 6 '15

Motor vehicle registrations and revenues, 1914. *Horseless Age* 35:620 *My* 5 '15

Motor vehicles in the United States. *Munic J* 38:657 *My* 13 '15

New England gains 48,063 cars in 2 years. J. T. Sullivan. *Automobile* 32:395-7 *Mr* 4 '15

New England will spend \$58,500,000 for cars and accessories. J. E. Schipper. *map Automobile* 32:439-41 *Mr* 11 '15

Northwest farmers offer big car market. *Automobile* 32:270-1 *F* 11 '15

Omaha—distributor for the grain belt. D. Beecroft. *Automobile* 32:355-6 *F* 25 '15

Rhode Island's registration analyzed. *Automobile* 33:879 *N* 11 '15

2,070,903 cars in United States. D. M. Lay. *map Automobile* 33:271-4 *Ag* 12 '15

261,860 cars have electric systems—other statistics. *Automobile* 33:342 *Ag* 19 '15

United States has 1,754,570 cars. D. M. Lay. *map Automobile* 32:525-7 *Mr* 25 '15

Unprecedented year for Studebaker corporation. *Horseless Age* 35:289-90 *Mr* 3 '15

Automobile lamps. See Automobiles—Lighting**Automobile laws and regulations**

Car should carry ownership guarantee. L. A. Ward. *Automobile* 32:670-1 *Ap* 15 '15

Motor car laws of all the states; tabulation. *Horseless Age* 36:216-17 *S* 1 '15

Why local regulations of motor truck traffic are objectionable. *Horseless Age* 35:407-9 *Mr* 24 '15

Yellowstone park automobile regulations now in effect. *Eng Rec* 72:172 *Ag* 7 '15

Automobile mufflers

Automobile muffler losses experimentally determined. *diags Horseless Age* 35:612-17 *My* 5 '15

Exhaust silencer operating on principle of neutralizing sounds. *diag Elec W*, 66:990-1 *O* 30 '15

Stamping an automobile muffler head. F. L. Prentiss. *Il Iron Age* 96:971-2 *O* 28 '15

Automobile number plates

New York state to use new style of automobile number plate. *Il Good Roads* n s 10:237 *O* 30 '15

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- Should dealers' parts accounts be standardized? A. H. Remsen. *Il Horseless Age* 36: 69 J1 21 '15
- S. A. E. suggests standard names. *Automobile* 33:303 Ag 12 '15
- Solving the spares problem: the Maxwell company's Newcastle plant. *Il Automobile* 32:316-20 F 18 '15
- Standardizing names of parts. *Automobile* 33: 236-7 Ag 5 '15

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Automobile patents

- Broad demountable rim patent upheld. *Il Horseless Age* 36:224+ S 1 '15
- Chamber of commerce to defend Kardo patents suit. *Horseless Age* 34:829-30 D 9 '14
- Court holds Baker front axle patent to be void. *Horseless Age* 35:285, 293-4 Mr 3 '15
- Decision rendered in carburetor suit. *Automobile* 32:296 F 11 '15
- Delco wins in self-starter patent suit. *Horseless Age* 35:324-324a Mr 10 '15
- N. A. C. C. cross-licensing patent plans now almost completed. *Automobile* 33:39+ J1 1 '15
- Ohio court dismisses Kardo axle patent suit. *Horseless Age* 35:625+ Ap 21 '15
- Perlman wins decision in long-contested demountable rim patent suit. *Automobile* 33: 394-5 Ag 26 '15
- Two-speed axle decision. *Automobile* 33:79-80 J1 8 '15

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- America's engineering triumph at the Sheepshead Bay speedway. A. L. Clayden. *Il Automobile* 33:696-8 O 14 '15
- Astor cup won at 102 miles per hour. *Il Horseless Age* 36:351-3+ O 15 '15
- Burman's Peugeot wins Oklahoma City race. *Horseless Age* 35:593 My 5 '15
- Burman's Peugeot wins Oklahoma race. C. S. Moore. *Il Automobile* 32:794-5 My 6 '15
- Dario Resta's Peugeot wins grand prize. *Horseless Age* 35:291-2 Mr 3 '15
- De Palma, in Mercedes, wins at 89.84 miles per hour. *Automobile* 32:969-73 Je 3 '15
- De Palma's Mercedes wins both Elgin races. *Horseless Age* 34:306-7 Ag 26 '14
- Fluctuations of the averages made in the season's leading contests. *Horseless Age* 36:165 Ag 15 '15
- Getting ready for the international sweepstakes; cars and drivers who will contest. *Il Horseless Age* 35:669-72 My 19 '15
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- How the Stutz cleaned up at the Elgin races. *Horseless Age* 36:214-15 S 1 '15
- Little tire trouble at Twin Cities. *Automobile* 33:457 S 9 '15
- Low speed marks Providence century. C. P. Shattuck. *Il Horseless Age* 36:312-13 O 1 '15
- Maxwell—Mercer—Duesenberg July 4 winners. *Automobile* 33:53-9 J1 8 '15
- Mulford wins 300-mile race on Des Moines speedway. *Il Automobile* 32:296-7 Ag 12 '15
- 1914—a good contest year. *Automobile* 31: 1147+ D 24 '14
- 1914 a year of speed records. J. T. Shaw. *Horseless Age* 34:839-840b D 9 '14
- Oldfield's Maxwell non-stop winner at Venice. *Il Horseless Age* 35:392-392b Mr 24 '15
- Over 100 miles per hour on Sheepshead speedway. *Il Horseless Age* 36:306-7 O 1 '15
- Overhead valves triumph. A. L. Clayden. *Il Automobile* 32:973-7 Je 3 '15
- Pullen wins Corona race at 87.7 m. p. h. *Il Automobile* 31:1017-19 D 3 '14
- Resta in Peugeot victorious. *Il Automobile* 33: 1-6 J1 1 '15
- Resta takes Harkness cup race at 105.39 miles per hour. *Il Automobile* 33:846-7 N 4 '15
- Resta wins again. *Il Automobile* 32:446-7 Mr 11 '15
- Resta wins Century at 101.86 miles per hour. *Il Automobile* 33:294-5 Ag 12 '15
- Resta wins grand prize. A. G. Waddell. *Il Automobile* 32:398-9 Mr 4 '15
- Resta's generalship won Vanderbilt. A. G. Waddell. *Il Automobile* 32:512-13 Mr 18 '15
- Resta's record 101.86 miles per hour. *Il Horseless Age* 36:166-7+ Ag 15 '15

- Review of Corona road race. H. G. Hall. *Il Horseless Age* 34:836-8 D 9 '14
- Rickenbacher wins Narragansett 100-mile. J. T. Sullivan. *Il Automobile* 33:554-5 S 23 '15
- Setting for the 500-mile race at Indianapolis. A. L. Clayden. *diags Automobile* 32:879-82 My 20 '15
- Speed records of the 500-mile race. *Automobile* 32:930-1 My 27 '15
- Stutz cars triumph at Elgin road races. *Il diags Automobile* 33:361-5 Ag 26 '15
- Stutz triumphs at 102.6 miles per hour. J. E. Schipper. *Il Automobile* 33:685-95 O 14 '15
- Stutz wins first and second places at Twin Cities. *Automobile* 33:455-6 S 9 '15
- Summary of the C. A. C. trophy race. *Horseless Age* 34:308-9 Ag 26 '14
- Thirty-two cars named for Vanderbilt cup race. *Il Horseless Age* 35:224a-224c F 17 '15
- 350-mile Astor cup auto race. *Il Sci Am* 113: 357+ O 23 '15
- Twenty-two cars qualify for 500-mile race. D. Beecroft. *Automobile* 32:923-5 My 27 '15
- Twin City race won by fifth of second. *Il Horseless Age* 36:260-1+ S 15 '15
- Vanderbilt cup race also won by Resta's Peugeot. *Il Horseless Age* 35:325-8 Mr 10 '15
- Winning of the grand prize. A. G. Waddell. *Il Automobile* 32:448-9 Mr 11 '15
- World's records made in 500-mile sweepstakes. *Horseless Age* 35:725-9 Je 2 '15
- World's records shattered at Chicago. *Il Horseless Age* 35:865-8 Je 30 '15

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- Can manufacturers have a standard service policy? A. Macauley. *Horseless Age* 35:606-8 My 5 '15
- Metropolitan section of S. A. E. discusses truck makers' obligations to customers. B. B. Bachman. *Automobile* 32:772-3 Ap 29 '15
- Service heads want standard policy. *Automobile* 33:83-5 J1 8 '15
- Service managers discuss their problems. J. Smith. *Horseless Age* 36:9-10 J1 7 '15
- Sub-division, saving and safety. *Horseless Age* 34:869-70 D 16 '14
- Truck makers to decide on standard service policy. L. V. Spencer. *Automobile* 32:841-4 My 13 '15

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- Rear signaling devices for automobiles. *Il Sci Am* 113:274-5 S 25 '15

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- Motor travel in desert country of southern California. L. H. Eddy. *Il Eng & Min J* 100:835-7 N 20 '15
- Sixth volume added to Blue books. maps. *Automobile* 32:596-9 Ap 1 '15
- Three routes offered to Pacific coast tourists. *Automobile* 31:1079 D 10 '14

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- Industrial plant automobile trailer. *Il Iron Age* 96:133 J1 15 '15

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- Abbott-Detroit eight. *Il Automobile* 33:520-1 S 16 '15
- Abbott eight—a new model with interesting features. *Il Horseless Age* 36:14-15 J1 7 '15
- Allen line two models on one chassis. *Il Automobile* 33:882-3 N 11 '15
- Argo chassis larger for 1916. *Il Automobile* 33:110-12 J1 15 '15
- Auburn models for 1916—a six and four. *Il Horseless Age* 35:812 Je 16 '15
- Auburns, 1916—a six and a four. *Il Automobile* 33:156-7 J1 22 '15
- Autos and the electric car. J. A. Beeler. *Elec Ry J* 46:590-2 S 18 '15
- Briacoe eight and four in same chassis. *Il diags Automobile* 33:151-5 J1 22 '15
- Briacoe line, 1916, which will be made up of an eight and a four. *Il Horseless Age* 36:12-13 J1 7 '15
- Bulcks for 1916 to be sixes exclusively. *Il Horseless Age* 35:770-1 Je 9 '15

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- Buicks, 1916, are both sixes. *II* Automobile 32:1068-71 Je 17 '15
- Cadillac eight in second year. *II* diags Automobile 33:188-91 JI 29 '15
- Cadillac eight with detail refinements known as type 53. *II* Horseless Age 36:134-5 Ag 1 '15
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- Car of 1915. S. P. McMinn. *II* Sci Am 112:10+ Ja 2 '15
- Car that stays young. Automobile 33:429-31, 517-19, 612-15 S 2, 16, 30 '15
- Chalmers brings out light six. *II* diags Automobile 33:925-7 N 18 '15
- Chalmers cars in three models for 1916. including a new six-40. *II* Horseless Age 36:50-1 JI 14 '15
- Comparison of features of the average American car for 5 years. Automobile 31:1193 D 31 '14
- Cornellian—a unique light car. *II* Horseless Age 35:814 Je 16 '15
- Cornellian—body acts as frame in new model. *II* diags Automobile 32:726-7 Ap 22 '15
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- Daniels eight of strong construction. *II* Automobile 33:756 O 21 '15
- Davis line is four, two sixes and twelve. *II* Automobile 33:478 S 9 '15
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- Engineering development—1915; alphabetical list of cars and description of new designs. diags Automobile 31:1228-60 D 31 '14
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- Flat bodies of distinctive design. *II* diags Automobile 33:60-2 JI 8 '15
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- Grant popular-priced six. *II* Horseless Age 34:971-2 D 30 '14
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- Hollier eight cleverly designed. *II* Automobile 32:857-9 My 13 '15
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- Hupmobile—larger motor in 1916. *II* diags Automobile 32:982-5+ Je 3 '15
- Hupmobile model K has larger engine. *II* Horseless Age 34:322 Ag 26 '14
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- Kissel adds four-cylinder chassis. *II* diags Automobile 33:469-71 S 9 '15
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- Krit 1915 shows little change. *II* Horseless Age 34:323-4 Ag 26 '14
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- Miscellaneous mechanical details of show cars. A. C. Woodbury. *II* diags Horseless Age 35:17-21 Ja 6 '15
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- Moline-Knight featured by simplicity. *II* diags Automobile 33:336-9 Ag 19 '15
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- Moon cars have Continental motors. *II* diags Horseless Age 34:325 Ag 26 '14
- Moon 1916 line comprises a 6-30 and a 6-40. *II* Horseless Age 35:874-5 Je 30 '15
- Motor cars—1914. Engineer 119:8-9 Ja 1 '15
- National adds a twelve and a six. *II* Automobile 32:940-1 My 27 '15
- National highway twelve. *II* diags Automobile 33:326-7 Ag 19 '15

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- National highway twelve. *Il* Horseless Age 36:222-3 S 1 '15
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- New car models seen at the Palace show. *Il* diags Automobile 32:1-4 Ja 7 '15
- Niagara four—European touches. *Il* Automobile 33:418-19 S 2 '15
- Nine new cars on display at Chicago. *Il* Automobile 32:178-81 Ja 28 '15
- 1915—a 7-league stride: eight-cylinder motors—sixes for less than \$800—vacuum feed—spiral bevel gears. Automobile 31:1187-93+ D 31 '14
- Oakland adds eight-cylinder model. *Il* Automobile 33:789-91 O 28 '15
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- Oakland six—new low-priced. *Il* diags Automobile 32:1026-9 Je 10 '15
- Oldsmobile eight, model 44 with helical final drive. *Il* Horseless Age 36:362-3+ O 15 '15
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- Oldsmobile light eight. *Il* Automobile 33:746-7 O 21 '15
- Oldsmobile—the model 43 for 1916. *Il* Horseless Age 35:813 Je 16 '15
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- Overland 83 to sell at lower figure. *Il* Horseless Age 35:736-7 Je 2 '15
- Overland four. *Il* diags Automobile 33:928-31 N 18 '15
- Overland four—price lower. *Il* diags Automobile 32:978-81+ Je 3 '15
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- Owen magnetic car. *Il* diags Horseless Age 34:913-14 D 23 '14
- Owen magnetic; five cars make 800-mile run through mountain sections. *Il* Automobile 33:616-17 S 30 '15
- Packard brings out twin six chassis. *Il* diags Automobile 32:932-6 My 27 '15
- Packard with 12 cylinders. *Il* diags Horseless Age 35:702-4 My 26 '15
- Paige company enters the field of sixes. *Il* Horseless Age 34:907-8 D 23 '14
- Paige has new block six at \$1,395. *Il* Automobile 31:1038-9 D 3 '14
- Paige model, the 6-36 announced for 1916. *Il* Horseless Age 35:766-7 Je 9 '15
- Pathfinder twelve and six for 1916. *Il* diags Automobile 32:1064-6+ Je 17 '15
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Chart of equivalent uniform loads for railway bridges. D. B. Steinman. *Eng N* 73:780-2 Ap 22 '15

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- Equivalent uniform loads for long-span bridges. D. B. Steinman. Eng N 73:370 F 25 '15
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- Bridge renewal without falsework or interference with traffic. Il diag Ry Age 58:318-19 F 19 '15
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- Coating disintegrated stone abutments with concrete. Il Eng Rec 71:337-8 Mr 13 '15
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- Development of the Sudan. *Il map plans diags Engineer 119:271-4 Mr 19 '15*
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Sci Am 113:63 J1 '15

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- By-laws. *Elec R & W Elec'n* 67:841-3 N 6 '15
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- Convenient form of plate caliper. *Locomotive*
30:169-70 Ap '15

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Callow pneumatic process. See Flotation process**Calorimeters and calorimetry**

- Acid-resisting alloy to replace platinum in
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N '15

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Osborne. *Il diags U S Bur Stand Bul* 12:22-
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My '15; Summary. *J Fr Inst* 179:492-3 Ap '15
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bustion of cane sugar, benzoic acid, and
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H. B. C. Allison and L. A. Hawkins. *Il Gen*
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- Sewage-treatment plant at Calvert. T. L.
Fountain. *Il diags plan Eng N* 73:930-4 My
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- Volatile oil of calycanthus floridus. E. R.
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Electricity in the publishing business. *Il Elec R & W Elec'n* 65:1069-72 D 5 '14

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Camden's municipal asphalt plant. *Il Munic J* 38:127-9 F 4 '15

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Machine reproduces, develops and prints all in itself. *Il Eng Rec* 72:32 J1 3 '15

Photographing on both sides of a sheet. *Il Iron Age* 95:1122-3 My 20 '15

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Camera for reading meters. *Il Am Gas Light J* 103:141 Ag 30 '15; *Mach* 22:75-6 S '15

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Camp buildings. *See* Construction camps**Campbell, William Wallace, 1862-**

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Our beginnings in camphor. *Sci Am* 112:71 Ja 16 '15

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Boy scouts and forests. K. W. Woodward. *Il Am For* 21:103-9 F '15

Camps, Construction. *See* Construction camps**Camps, Military**

Camp engineering—water purification. *Sci Am S* 79:383 Je 12 '15

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Parks in the Canadian Cordillera. J. A. Allan. *Il Sci Am S* 80:360-2 D 4 '15

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Mineral production of Canada. J. McLeish. *Eng & Min J* 99:488-9 Mr 13 '15

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Connecting Idaho with the sea; completion of the Cello canal along the Columbia river. F. W. Vincent. *Il Sci Am* 112:476 My 22 '15

Construction of the Welland ship canal. W. A. Craick. *Il plan Int Marine Eng* 20:154-6 Ap '15

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Locks

See Locks (canals and rivers)

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Disposal of cannery wastes. D. Englis. *Munic J* 38:68-9 Ja 21 '15

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River-front improvement at Cape Girardeau. *Il Eng N* 73:874-5 My 6 '15

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- Heating and ventilating plant for the Missouri state capitol; reversible system of air supply for house and senate chambers. *il diags plans Heat & Ven* 12:13-21 My '15
- Thomas Jefferson and the first monument of the classical revival in America. F. Kimball. *il Am Inst Arch J* 3:370-81, 421-34, 473-91 S-N '15
- Utah state capitol. *il Arch & Bldg* 47:324-30 S '15

Car. See Cars**Car and locomotive painters' association. See Master car and locomotive painters' association****Car builders' association, Master. See Master car builders' association****Car cleaning**

- Car-cleaning practice. *Elec Ry J* 45:515-16 Mr 13 '15
- Plant for sand blasting steel cars. *diags Ry Age* 59:397-8 Ag 27 '15; Same. *Ry Age (Mech ed)* 89:427-8 Ag '15
- Use of the vacuum system for cleaning cars in San Francisco. F. W. Allen. *il Elec Ry J* 46:516-17 S 18 '15
- Vacuum cleaning cars. E. J. Haines. *il Elec Ry J* 46:323 Ag 21 '15

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- Automatic freight truck coupler. *il Ry Age* 59:467-8 S 10 '15
- Emergency coupler head. *diag Ry Age (Mech ed)* 89:484-5 S '15
- Handling coupler yokes. *il Ry Age (Mech ed)* 89:592 N '15
- Master car builders' association committee report. *Ry R* 56:837-8 Je 19 '15
- Omaha coupler with air and electrical connections for trailer service. T. E. Wood. *il diags Elec Ry J* 44:1257 D 5 '14
- Proposed M. C. B. standard coupler. *Ry R* 55:765-6; 56:59-60, 121, 186-7 D 26 '14, Ja 9, 23, F 6 '15

Car distributor. See Railroads—Management**Car dumping machines. See Dumping appliances****Car fenders**

- Novelty in fenders. *il diags Elec Ry J* 45:723-4 Ap 10 '15

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- Car ferry of the Florida East Coast railway. *il plan Ry Age* 58:188 Ja 29 '15
- Car-transfer ferry on the Ohio; C. R. & O. R. R. *diags plans Eng N* 74:599-600 S 23 '15
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- Portable stop for a car-ferry incline. *diag Eng N* 74:221 JI 29 '15
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- Carhouse for a residential district. *il diag plan Elec Ry J* 45:660-3 Ap 3 '15
- Carhouse of Seattle municipal railway. H. J. Kennedy. *il Elec Ry J* 45:513-14 Mr 13 '15
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- Fireproof carhouse at Vancouver. B. C. *il plan Elec Ry J* 45:227-8 Ja 30 '15
- New carhouse and shops at Holyoke. *il plan Elec Ry J* 45:930-1 My 15 '15

See also Car inspection

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- Car service inspection in Seattle. J. W. McCloy. *Elec Ry J* 46:272-3 Ag 14 '15
- Chief interchange car inspectors' and car foremen's association, 17th annual convention. *Ry Age (Mech ed)* 89:522-5 O '15
- Inspection and repairs of freight cars by piecework. J. J. Tolin. *Ry Age (Mech ed)* 89:467-8 S '15
- Making of good car inspectors. A. M. Orr; "E. C." *Ry Age (Mech ed)* 89:575-8 N '15
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- Improved head-end axle generating system for train lighting. *il Elec R & W Elec'n* 67:490-1 S 11 '15
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- Car load. See Freight car service—Car load**
- Car painting**
- Master car and locomotive painters' 46th convention. *Ry Age* 59:565-8 S 24 '15
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- Painting cars in two days. P. V. See. *il diag Elec Ry J* 45:584-6 Mr 20 '15
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Car pooling. See Freight car service**Car pullers**

- Car-pullers for switching at industrial plants. Eng N 74:299 Ag 12 '15

Car resistance. See Train resistance**Car roofs**

- Passenger car roof construction. diags Ry Age 59:332 Ag 20 '15; Same. Ry Age (Mech ed) 89:485-6 S '15
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Car sanitation. See Car cleaning; Car ventilation; Cars—Disinfection**Car shops.** See Railroads—Shops**Car signs**

- Route signs for surface cars. il Elec Ry J 46:260-2 Ag 14 '15

Car spotting charges. See Railroads, Industrial**Car trucks**

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- Accident caused by defective wheels. H. W. Belnap. Ry Age 59:48 JI 9 '15
 Annealing car wheels. W. J. Keep. Foundry 43:187-8 My '15
 Association of manufacturers of chilled iron wheels; presidential address. G. W. Lyndon. Ry R 57:505-6 O 16 '15; Same cond. Ry Age 59:690 O 15 '15; Same cond. Ry Age (Mech ed) 89:578 N '15; Excerpt. Elec Ry J 46:918 O 30 '15
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- Acetolysis of carbohydrates. S. Born and J. M. Nelson. Am Chem Soc J 37:1763-9 JI '15

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- Casting concrete pipe out of doors in winter at Hamilton, Ontario. A. F. Macallum. il Concrete Cem 7:174 N '15
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Lake traverses on railroad preliminary work. J. A. Mac Donald. Eng Rec 71:48 Ja 9 '15

Methods and instruments used in making precise surface and underground surveys for the Canadian Northern Ry. tunnel, Montreal, Canada. J. L. Busfield. II diag plan Eng & Contr 42:383-6 O 21 '14

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Railroad supply co. wins its case against infringers of the Wolhaupter patents. II Ry R 56:60-6 Ja 9 '15

Thomas rail anchor tie plate. II Ry Age 59:752 O 22 '15

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- Air seasoning of ties. A. H. Noyes. Ry R 56: 111 Ja 23 '15
- Behavior of treated ties in alkali soils. Elec Ry J 46:1002 N 13 '15
- Cresotizing of cross ties as practiced by American railroads. A. C. Steinmayer. Il Assn Eng Soc J 54:110-20 Mr '15
- Distribution and care of cross-ties. E. F. Robinson. Ry Age 58:855 Ap 16 '15
- Justifiable expenditure for tie treatment. H. Emerson and T. T. Bower. Eng Rec 71: 106-7 Ja 23 '15; Same. Eng M 48:903-5 Mr '15; Summary. Ry Age 58:159-60 Ja 22 '15
- Mechanical life of ties as affected by ballast. E. Stimson. Eng Rec 71:105-6 Ja 23 '15; Same. Ry Age 58:161 Ja 22 '15; Same. Ry R 56:119-21 Ja 23 '15
- Pine ties reused by street railway after twenty-one years' service. R. C. Cram. Elec Ry J 45:295-6 F 6 '15
- Pneumatic tie peeler. Il Ry Age 59:342 Ag 20 '15
- Proper supervision of tie renewals. A. W. Tabert. Ry Age 58:848 Ap 16 '15
- Renewal of ties—inspection, marking and records. Ry Age 58:1073-6 My 21 '15
- Renewing bridge ties on the Lehigh valley R. R. Il Ry R 57:492-3 O 16 '15
- Renewing ties in stone and earth ballasted track. P. J. McAndrews. Ry Age 58:847-8 Ap 16 '15
- Report of A. R. E. A. committee. Ry R 56: 394-6 Mr 20 '15
- Seasoning of softwood ties. A. H. Noyes. Eng Rec 71:105 Ja 23 '15
- Sill ties—treated or untreated timber, or concrete? F. J. Angier. Eng Rec 71:105 Ja 23 '15; Same. Ry Age 58:162 Ja 22 '15; Same. Ry R 56:367-8 Mr 13 '15
- Standard methods of piling and marking ties on the Pennsylvania. Il Ry Age 58:334-5 F 19 '15
- Steel vs. wood ties in city track construction. J. A. Nester. Il Elec Ry J 46:1089 N 27 '15
- Tie preservation on the Baltimore & Ohio R. R.; abstracts. F. J. Angier. Ry Age 59:537-8 S 17 '15; Eng & Contr 44:396-7 N 17 '15; Ry R 57:630-3 N 13 '15
- Tie timber and the unnecessary wear and tear of track. G. E. Rex. Ry R 57:362-3 S 18 '15
- Tie treating on the Boston & Worcester street railway. Il Elec Ry J 45:678-9 Ap 3 '15
- Tie treatment in British India. Il Ry R 56: 248-9 F 20 '15
- Treated cross-ties: discussion at convention of Am. wood preservers' association. Elec Ry J 45:182 Ja 23 '15
- Treated ties on the Southern Pacific Ry. J. Q. Barlow. Eng N 74:1093 D 2 '15
- Treatment of red oak ties. Ry Age 58:159 Ja 22 '15

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- Annual cost of ties. J. G. Sullivan. Ry Age 59:352 Ag 20 '15
- Determination of annual charge for ties, poles and fence posts. W. F. Goltra. Ry Age 58: 1087 My 21 '15
- Diagrams for cost of ties; Canadian Pacific railway. Eng N 74:292 Ag 12 '15
- Figuring the annual cost of ties. H. Emerson. Ry R 57:235-6 Ag 21 '15
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- Purchases in Canada during 1914. Ry Age 59: 970 N 19 '15

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- Reinforced-concrete ties after service. Il Eng N 74:77-8 JI 8 '15

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- Detail cost of track work with steel twin ties. A. J. Wolfe. diags Elec Ry J 46:916-17 O 30 '15
- Developments with steel ties on the Bessemer & Lake Erie R. R. Il diags Ry R 56:10-11 Ja 2 '15

Four years of maintenance of a track crossing on steel substructure. C. A. Prentice. Elec Ry J 46:1044-5 N 20 '15

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- Development of the steam railroad. Il diags Sci Am 112:525-6+ Je 5 '15
- Engineering considerations in a proposed line. Elec Ry J 45:512, 799 Mr 13, Ap 24 '15
- International engineering congress meeting at San Francisco; abstract of papers and discussions relative to railroads. Ry Age 59: 599-608 O 1 '15
- Railways. W. B. Parsons. Elec Ry J 46:623-4 S 25 '15
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- To Cuba by rail. H. C. Plummer. Il map Sci Am S 79:40-1 Ja 16 '15

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- Accident bulletin no. 52. Ry Age 58:299-300 F 19 '15
- British railway accidents. H. R. Wilson. Eng N 73:436 Mr 4 '15
- Five years of safety first on the Chicago & Northwestern Ry. Ry R 57:180-1 Ag 7 '15
- French railway accidents in war-time. W. S. Hiatt. Ry Age 59:1015-16 N 26 '15
- Grade crossing elimination; comparison of casualties with automobile accidents. Ry Age 59:634-5 O 8 '15
- Gretna collision. Ry Age 59:653 O 8 '15
- Gretna railway accident. Engineer 119:535 My 28 '15
- I. C. C. accident reports. Ry Age 59:695-6 O 15 '15
- Interstate commerce commission quarterly accident report. Ry R 56:599-600 My 1 '15
- Maximum rate of safe retardation for passenger cars and elevators. Eng N 72:1132-3 D 3 '14
- New safety first record for railways of the United States. Ry R 57:493 O 16 '15
- New York Central awarded Harriman safety medal. Ry Age 58:271-2 F 12 '15
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- Remarkable collision between an oil car and a steam locomotive. C. A. Byers. Il Sci Am 113:269 S 25 '15
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- Report on the wreck at Tipton Ford, Mo., Kansas City Southern Ry. Ry R 55:694-5 D 5 '14
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- Progress on Summit cut-off of the Lackawanna. II diags Ry Age 58:235-9 F 5 '15
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- Thirty miles of Chesapeake & Ohio Northern begun. map Eng Rec 72:300-1 S 4 '15
- \$24,000,000. South Philadelphia railroad improvement now well under way. II map Eng Rec 72:327-9 S 11 '15
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- Development of Long Island. H. B. Fullerton. Ry Age 57:1940-1 D 4 '14
- Getting city people back to the country. F. H. La Baume. Ry Age 57:1057 D 4 '14
- Nineteen years' development work on the Santa Fe. Ry Age 58:1465-8 Je 25 '15
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- Building low-grade line for Norfolk & Western R. R. II map Eng N 74:818-21 O 28 '15
- Calculating cross section areas on railroad valuation work. F. T. Morse. Ry Age 59:29 JI 2 '15
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- Method of obtaining volumes in railroad or ditch work. F. C. Snow. Eng & Contr 43:304 Mr 31 '15
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- Association of railway electrical engineers 8th annual convention, Chicago, Oct. 19-22. Ry R 57:529-30 O 23 '15
- Recent improvements in the electric lighting of steam railroad cars. R. C. Lanphier. II diags Am Inst E E Pro 34:1829-46 Ag '15
- Underframe axle lighting equipment. II diags Ry R 56:568-70 Ap 24 '15; Ry Age (Mech ed) 89:257-8 My '15
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- Adding electric power to a railroad between the Broad street station and the West Philadelphia yards. Sci Am 113:95 JI 31 '15
- Australian railways to be electrified. Elec Ry J 46:1037 N 20 '15
- Butte, Anaconda & Pacific railway contact system. J. B. Cox. II diags map Am Inst E E Pro 34:1447-76 Ag '15; Same. Gen Elec R 18:842-59 Ag '15; Abstract. Elec Ry J 46:59-60 JI 10 '15
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- C. M. & St. Paul—electrification of 440.5 miles. II map Ry Age 58:683-9 O 15 '15
- C. M. & St. P. electrification of the Puget Sound lines. A. H. Armstrong. II diags maps Gen Elec R 18:842-59 Ag '15; Same. Ry Age 57:1193-5 D 25 '14; Same. Elec R & W Elec'n 18:842-59 Ag '15; Same. Ry R 56:96-100 Ja 18 '15
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- C. M. & St. P. operating plans for the electrification project. II Elec Ry J 44:1341-2 D 19 '14
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- Chicago, Milwaukee & St. Paul Ry.—electrification of terminal line at Great Falls, Mont. *Il Ry R* 57:57-8 *JI* 10 '15
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